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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,847	07/25/2003	Li-Ying Yang	FDN-2794	2639

7590 09/21/2004

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EXAMINER	
JACKSON, MONIQUE R	

ART UNIT	PAPER NUMBER
1773	

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/627,847	YANG, LI-YING	
	Examiner	Art Unit	
	Monique R Jackson	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-5 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-5 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-5 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for polyester reinforced metallocene catalyzed polyethylene membranes, does not reasonably provide enablement for any metallocene catalyzed polyolefin membrane. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The specification only discloses heat seam peel strengths and cold brittleness point values as instantly claimed for a membrane produced from metallocene catalyzed polyethylene and not from any metallocene catalyzed polyolefin wherein there are many olefin polymers and copolymers that may be produced by metallocene catalysts other than the EXACT polyethylenes utilized in the invention. Further, the instant disclosure teaches that various additives may be incorporated into the polyolefin layers and that these same conventional ingredients were incorporated into the inventive examples resulting in the claimed property values and included 0-80 parts of fire retardant, 0-55 parts of crystallinity enhancing polymers, 0-50 parts of ethylene-propylene rubber and a number of other additives, with no indication of the specific types of additives or amounts utilized or how they affect the claimed heat seam peel strength or cold brittleness point. Other than the examples provided, which are produced utilizing metallocene catalyzed polyethylene, with no clear indication of the type and amount of the other ingredients, the instant disclosure

provides little to no guidance for one skilled in the art to be able to make the roofing membrane with the required heat seam peel strength and cold brittleness point. Hence given the level of predictability in the art, the original disclosure does not describe the subject matter in a way that one skilled in the art could make the invention without performing undue experimentation to determine what metallocene catalyzed polyolefin in combination with what 10-50% of various additives would produce the instantly claimed membrane with the desired heat seam peel strength and cold brittleness point.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Glogovsky et al (USPN 6,743,864.) Glogovsky et al teach a polyolefin composition including 15-40wt% of a crystalline polypropylene, 60-85wt% of an elastomeric fraction such as ethylene-butene copolymer, both of which may be produced by metallocene catalysts, and up to 50wt% of conventional additives, wherein the polyolefin composition may be utilized to produce roofing membrane of 5 to 200 mils that may be scrim reinforced (Abstract; Col. 5; Col. 7, lines 19-30; Col. 8, lines 14-60) wherein the Examiner takes the position that the invention taught by Glogovsky et al would inherently possess the same properties as instantly claimed given that the

membrane taught by Glogovsky et al comprises the same materials as the roofing membrane instantly claimed.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Middlesworth et al (US H2000 H.) Middlesworth et al teach a metallocene-catalyzed polyolefin composition comprising a 30-70% of a metallocene-catalyzed polyethylene with a molecular weight distribution of less than 3, preferably less than 2.5, such as EXACT 3028 – an ethylene/butene copolymer from Exxon-Mobil, and 30-70% filler that may include various additives including a crystalline polymer, wherein one or more films of the composition may be useful in producing roofing membranes and may be laminated to a fabric or reinforcing material (Abstract; Col. 2, lines 6-20; Col. 3; Col. 6; Col 7, lines 48-68.) Though Middlesworth et al teach that the metallocene catalyzed polyolefin composition can be utilized in producing roofing membranes and may be laminated to a reinforcing fabric, Middlesworth et al do not specifically teach incorporating a reinforcing material between two layers of the polyolefin composition to produce a single ply roofing membrane however it is well established in the art that a single ply roofing membrane may be produced by sandwiching a reinforcing material between cap and base layers and hence it would have been obvious to one skilled in the art to produce the roofing material as such and further that one skilled in the art at the time of the invention would have been motivated

to determine the optimum thickness of the resulting membrane given that thickness is a result-effective variable affecting the flexibility and mechanical properties of the membrane for a particular end use. Lastly, the Examiner takes the position that a roofing membrane produced from the metallocene catalyzed polyolefin composition taught by Middlesworth et al would exhibit heat seam peel strength values and cold brittleness point values with the instantly claimed ranges given that the polyolefin compositions are the same, or alternatively, one skilled in the art at the time of the invention would have been motivated to determine the optimum amount of filler material to utilize to provide the desired heat seam peel strength for the roofing membrane taught by Middlesworth et al (wherein the Examiner notes that even the comparable examples disclosed in the instant application have cold brittleness point values well below 50°C of instant claim 1.)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on 571-272-1516. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monique R. Jackson
Primary Examiner
Technology Center 1700
September 15, 2004